

REMARKS

This amendment is in response to the Office Action of July 9, 2007 in which claims 1-5, 7, 8, 11-14, 16 and 17 were rejected and claims 6, 9, 10, 15, 19 and 19 are objected to.

Various of the previously presented claims are changed in ways believed related only to matters of form. For example, reference numerals/labels are removed from the claims, which change does not affect the scope of the claims per MPEP § 608.01(m) (the use of reference characters is considered as having no effect on the scope of the claims). Also, the claims are amended to remove "step of" language. New claim 20 is added which is fully supported by the specification and previously presented claim 11: claim 20 recites a limitation from amended claim 11. Since amended claims submitted herein do not contain any new matter compared to previously presented (original) claims, no new search is necessary.

The specification is objected to because of informalities, i.e., using "SUI" (speech user interference) and "ISU" (interference speech user) abbreviations, and it is requested by the Office to consolidate these abbreviations in one. The applicant is of opinion that the requested change will require a lot of changes in the specification, in claims and in Figures. Even some signals has to be renamed because they are distinguished by using

SUI and ISU abbreviations (e.g., SUI and ISU signals). Since all these acronyms are clearly defined in the specification, there is no reason to make the requested changes. The applicant is not familiar with a rule or a statute which will require the change requested by the Office. Therefore, the applicant requests the Office to reconsider this objection, and if not, to provide the appropriate statute or rule requiring the requested changes.

Claims 1-2 and 11 are rejected under 36 U.S.C. 103(a) as being unpatentable over Kawamoto et al (US Patent Application 2003/0235240) in view of Blessent (US Patent Application 2003/0021333). The applicant is of opinion that the arguments presented by the Office are not accurate.

The Examiner's arguments are analyzed using MPEP paragraph 2143 which states:

"To establish a *prima facie* case of obviousness three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

For example, in regard to independent claims 1 and 11 (see amended claims 1 and 11), the fundamental difference between teachings of Kawamoto et al and the present invention recited in claims 1 and 11 is the fact that the Walsh demodulator 118 of Figure 9 in Kawamoto et al, referenced by the Examiner, is a "maximum value" demodulator as shown in figure 3 and disclosed on page 4, paragraphs 0056-0058 of Kawamoto et al.

In other words, the receiving side (see paragraph 0056 of Kawamoto et al) does not know which code being transmitted". Therefore (see paragraph 0057 of Kawamoto et al), "Although a noise component is added to the received data in practice, correlation with all Walsh codes is calculated and the code having the maximum correlation value is selected." This is a typical demodulation procedure.

The algorithm recited in claims 1 and 11 of the present invention is completely different from the demodulation algorithm of Kawamoto et al referenced by the Examiner, because the algorithm disclosed in the present invention is not a demodulation process with unknown signals coming to the receiver as disclosed by Kawamoto et al, but a process with "known" signals and with known spreading codes for these signals for separating the input signal into the useful "known" signals and the noise. Therefore the algorithm disclosed in the present invention does not calculate correlation for all spreading codes (as in Kawamoto et al) but only for the known spreading codes for the expected signal. Therefore, according to the embodiment of the present invention recited in claims 1 and 11, the input signal is split into two components: a) the

desired HSDPA signal corresponding to the known spreading codes and b) the interfering speech user signal with unknown spreading codes (i.e., the rest of the input signal), whereas, in Kawamoto et al, signals are evaluated using correlation analysis with all spreading codes but the signal corresponding to the maximum correlation value is selected, which is different from what is disclosed in the present invention.

Thus in Kawamoto et al, the selection procedure, i.e., demodulation of a signal from a plurality of possible signals using all spreading codes, is different from the procedure of separation of the expected signal with the known spreading code from the noise as recited in the present invention. Moreover, Kawamoto et al has only one output signal corresponding to a signal with the maximum correlation value and other signals are not considered for further processing, whereas in the present invention (as recited in claims 1 and 11) both signals, as described herein, are generated and used for further processing.

Since rejection of amended claims 1 and 11 is based on the reference of Kawamoto et al and is shown to be inapplicable as argued herein, independent claims 1 and 11 of the present invention are novel and non-obvious over Kawamoto et al in view of Blessent under 36 U.S.C. 103(a), contrary to what is alleged by the Examiner.

In reference to dependent claim 2, the novelty and non-obviousness of dependent claim 2 are provided by the novelty and non-obviousness of independent claim 1.

Claims 3-5, 7-8, 12-14 and 16-17 are rejected under 36 U.S.C. 103(a) as being unpatentable over Kawamoto et al (US

Patent Application 2003/0235240) in view of Blessent (US Patent Application 2003/0021333) and in further view of Schmidl (US Patent 6,816,541).

First, the novelty and non-obviousness of dependent claims 3-5, 7-8, 12-14 and 16-17 are provided by the novelty and non-obviousness of independent claim 1 and 11. More arguments in regard to specific limitations recited in dependent claims 3-5, 7-8, 12-14 and 16-17 and not disclosed by Schmidl and in regard to "combinability" of references quoted by the Examiner (e.g., their combination is not compatible and is teaching away from the embodiments of the present invention) can be made if requested by the Office.

In addition, in regard to claim 3-5, 7-8, 12-14 and 16-17 of the present invention, the Office failed to show *prima facie* case of obviousness and demonstrate or provide any reasonable arguments in regard to "suggested desirability or motivation" or "reasonable expectation of success" for combining references by a person skilled in the art at the time of the invention without the benefit of hindsight (assuming for sake of argument only that quoted references teach or suggests all the limitations of independent claims 1 and 11), as required by MPEP paragraphs 2143 (quoted above) and 2142, and by an extensive case law on the subject.

If only for the sake of argument we assume that references quoted by the Examiner teach or suggest all the limitations of claims 1 and 11 (contrary to what is proven herein), there is no suggested desirability or motivation, expressed explicitly, implicitly or even hinted at by Kawamoto et al, Blessent and Schmidl or

generally available to one of ordinary skill in the art to incorporate Schmidl and Blessent into Kawamoto et al. to arrive at the subject matter of claim 43-5, 7-8, 12-14 and 16-17 of the present invention (as required by the MPEP Paragraph 2143 referenced above and by the case law) without the benefit of hindsight. (the Examiner did not proof otherwise, but the Examiner bears a burden of proof as stated in MPEP Paragraph 2142.)

Also, the Examiner's reasoning, e.g., "providing a reliable received signal with minimal implementation (computational) complexity and provide an economical and reliable receiver" for incorporating Schmidl into combination of Kawamoto et al and Blessent to arrive at the subject matter of claims 3-5, 7-8, 12-14 and 16-17 is practically similar to "shared advantage" approach such as achieving competitive advantage or economical advantage (which can make any invention obvious) irrelevant to the "problem to be solved" by the present invention, e.g., providing a blind speech user interference cancellation for a high speed downlink packet access.

The Manual of Patent Examining Procedure (the MPEP) clearly refers to the "problem to be solved" approach and cites a relatively recent Federal Circuit case supporting its use:

"The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34

(Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). MPEP 2143.01.

The rejections and objections of the Official Action of November 27, 2007 having been obviated by Amendment or shown to be inapplicable, withdrawal thereof is requested, and passage of the claims to issue is earnestly solicited.

Respectfully submitted,



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